Question Paper Code	13042

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2024

Second Semester

M.E. - Computer Science and Engineering

20PCSPC203 - CLOUD COMPUTING TECHNOLOGIES

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks	K-Level	CO
1.	What is meant by Emulation?	2	K1	CO1
2.	Explain the term Virtualization.	2	K2	CO1
3.	State resource pool.	2	K1	CO2
4.	Explain in short the concepts of virtual workload allocation.	2	K2	CO2
5.	List the main characteristics of cloud computing.	2	K1	CO3
6.	Define the role of cloud auditor and cloud broker.	2	K1	CO3
7.	Recall the uses of Open stack.	2	K1	CO4
8.	Mention the advantages of using Hadoop.	2	K1	CO4
9.	Outline the security issues in the cloud.	2	K2	CO6
10.	What is Trust Management?	2	K1	CO6

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

				Marks	K-Level	CO
11.	a)		Discuss in detail about the VMs taxonomy.	13	K2	CO1
			OR			
	b)	i)	Interpret about the server consolidation in data centers.	6	K2	CO1
		ii)	List the migration steps of VM and describe performance effects of VM.	7	K2	CO1
12.	a)		Discuss in detail about Virtualization structure, Tools and Mechanisms.	13	K2	CO2
			OR			
	b)		Explain the Virtualization of CPU, Memory and I/O.	13	K2	CO2
13.	a)	i)	Make use of a neat diagram to discuss about the NIST cloud computing reference architecture.	9	K3	CO3
		ii)	Identify the pros and cons of cloud computing.	4	K3	CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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b)   Identify the different types of resource provisioning and explain each with an example.   *13   K3   CO3*

14.   a)   What is Open Nebula Cloud? Discuss the main components of Open Nebula.   *13   K2   CO4*

b)   Illustrate the Hadoop framework with neat diagram in detail.   *13   K2   CO4*

15.   a) i)   Discuss in detail about data security and its applications with suitable examples.   *7   K2   CO6*

   ii)   Illustrate in detail about the application security with an example.   *6   K2   CO6*

b)   Explain how the security governance, security monitoring and Risk management helps in providing cloud security.   *13   K2   CO6*

PART - C (1 × 15 = 15 Marks)

16.   a)   Infer the HDFS concepts with suitable illustrations and write a word count application with Hadoop Map Reduce programming model.   *15   K4   CO5*

b)   Examine in detail about how to set up a private cloud for an academic university using any one of the cloud environments.   *15   K4   CO5*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create